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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,355	06/23/2003	Leonard N. Schiff	010129U1/QUALP854USA	1702
70797 7590 06/24/2011 TUROCY & WATSON, LLP 127 Public Square 57th Floor, Key Tower Cleveland, OH 44114				
EXAMINER				
CHIAN, RICHARD				
ART UNIT		PAPER NUMBER		
2618				
NOTIFICATION DATE		DELIVERY MODE		
06/24/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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# Office Action Summary

**Application No.**

10/602,355

**Applicant(s)**

SCHIFF, LEONARD N.

**Examiner**

RICHARD CHAN

**Art Unit**

2618

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2-5-12, 16-22, 26-29, and 31-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-29, 31 and 32 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 7, 8, 16 and 18 is/are rejected.
- 7) ☒ Claim(s) 6, 9-11, 17 and 19-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5, 7, 8, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tailor et al. (European Patent Application No. 0 854,590) in view of Dietrich et al. (US 5,552,798).

Regarding claims 1 and 12, Tailor teaches of a method and apparatus, comprising: receiving a filter parameter at a satellite in orbit (col. 3, line 55- col. 4, line 30); receiving an input signal at the satellite (col. 3, line 55- col. 4, line 30); and programming a filter in the satellite to separate a plurality of sub-signals from the input signal based on the filter parameter (col. 3, line 55- col. 4, line 30) and filtering the input signal into the plurality of sub-signals as programmed based on the filter parameter (Figures 1B, 3, and 7 and paragraphs 0014 -0017, 0055); translating the plurality of sub-signals into an output signal (Figures 1B, 3, and 7 and paragraphs 0014 -0017, 0055); and transmitting the output signal from the satellite (Figures 1B, 3, and 7 and paragraphs 0014 -0017, 0055).

However the Tailor reference does not specifically disclose wherein the first sub-signal and a second sub-signal, wherein the first sub-signal comprises a forward link from the gateway to the user station, and the second sub-signal comprises a return link from the user station to the gateway.

The Dietrich reference discloses wherein an antenna for multipath satellite communication links discloses a forward link and reverses link satellite communication in which a pilot channel is a preprogrammed frequency channel by short code which is used to across the CDMA bandwidth. These different pseudonoise codes allow a suer to terminal to uniquely identify a gateway. (Col.9 line 14-28)

It would have been obvious to one of ordinary skill in the art to implement the satellite communication system of Dietrich in which the forward and reverse links are associated with preprogrammed frequency channels with the satellite communication of Tailor in order to identify specific gateway stations in the satellite communication platform.

Regarding claim 2, Tailor and Dietrich combined continues to disclose wherein the filter parameter comprises at least one of a high frequency limit for the input signal, a low frequency limit for the input signal, a median frequency to separate a first sub-signal from a second sub-signal within the plurality of sub-signals, and a set of frequency boundaries for each of the plurality of sub-signals. (col. 4, lines 31-31 & col. 6, line 55- col. 7, line 43).

Regarding claim 5, 16, Trailor and Dietrich combined disclose the method of claim 1, further comprising: applying different gain amounts to selected ones of the plurality of sub- signals. (col. 4, lines 31-31 & col. 6, line 55- col. 7, line 43).

Regarding claim 7 and 18, Trailor and Dietrich combined disclose the method of claim 1, wherein filtering the input signal comprises: sampling the input signal at a sample rate to produce a sample stream quantizing each sample of the sample stream into a particular number of bits; and processing the sample stream into the plurality of sub-signals,

Regarding claim 8, Trailor and Dietrich combined disclose the method of claim 1, wherein the input signal comprises uplinks from a plurality of beams and the output signal comprises downlinks to the plurality of beams, (col. 4, lines 31-31 & col. 6, line 55- col. 7, line 43) and wherein translating the plurality of sub-signals into the output signal comprises: switching the plurality of sub-signals from particular uplinks to particular down links. (col. 4, lines 31-31 & col. 6, line 55- col. 7, line 43).

***Allowable Subject Matter***

3. Claims 6, 9-11, 17, 19, 20, 21, and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 26-29 and 31-32 are allowed.
5. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 26, 28, and 32 the cited prior art does not teach or fairly suggest of a method and/or apparatus of operating a communications system, comprising: establishing a first portion of a frequency bandwidth to be received and processed by a satellite as a forward uplink, and a second portion of the frequency bandwidth to be received and processed by the satellite as a return uplink, the first and second portions comprising the total of the frequency bandwidth; monitoring traffic volume on each of the forward and return uplinks;

determining a third portion of the frequency bandwidth to be received and processed by a satellite as a forward uplink, and a fourth portion of the frequency bandwidth to be received and processed by the satellite as a return uplink, the third and fourth portions comprising the total of the frequency bandwidth;

transmitting instructions to the satellite, the satellite including circuitry responsive to the transmitted instructions, such that the amount of frequency bandwidth allocated to the forward and return uplinks is allocated in proportion to the monitored traffic volume on each of the forward and return uplinks.

Regarding claim 28, the cited prior art does not teach or fairly suggest of an apparatus for use in operating a communications system, comprising: means for

receiving an original signal at the satellite, said original signal having a first center frequency and a first bandwidth; and means for down-converting the original signal to the input signal, said input signal having a second center frequency equal to one-half of the bandwidth plus a frequency margin, and said input signal having the first bandwidth.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD CHAN whose telephone number is (571)272-0570. The examiner can normally be reached on Mon-Fri 10AM-6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571)272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NAY MAUNG/  
Supervisory Patent Examiner, Art Unit 2618

/RICHARD CHAN/  
Examiner, Art Unit 2618  
6/21/2011